



JOINT INDUSTRY PROJECT

**DEVELOPMENT OF GROUTED
TUBULAR JOINT TECHNOLOGY
FOR OFFSHORE STRENGTHENING AND REPAIR**

**PROGRESS REPORT No. 1
FOR PRESENTATION AT SECOND
PSC MEETING ON 24 MARCH 1994**

MSL Engineering Limited

Purpose of Issue	Rev	Date of Issue	Author	Agreed	Approved
Issued to PSC	0	March 1994	DJM	NS	ML

"This document has been prepared by MSL Engineering Limited for the Participants of the Joint Industry Project on Development of Grouted Tubular Joint Technology for Offshore Strengthening and Repair. This document is confidential to the Participants in the Joint Industry Project, under the terms of their contract for participation in the project"

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1. INTRODUCTION

This first progress report covers the period from 8 November 1993 to 18 March 1994. It is to be discussed at the second Project Steering Committee (PSC) on 24 March 1994.

2. **ACTIONS ARISING FROM PREVIOUS PSC MEETING**

The minutes of the first PSC meeting held on 8 November 1993 record the following actions on MSL:-

Action 1 and 3 - Procedures and Specifications

Procedures and Specification have been prepared for materials, fabrication, instrumentation and testing. These will be presented at the PSC meeting.

Action 2 - Pre-load Investigations

A technical report has been prepared and this will be presented and discussed at the Second PSC meeting.

Action 4 - Data capture

A detailed search has indicated that only a limited number of test results exist for grouted tubular joints. These results have been collated and assembled onto a database for assessment.

Action 5 - Lead-Tin Alloy

A meeting has been undertaken between MSL and Nottingham University to discuss lead-tin alloy model testing and potential use of this technique for this project. A discussion paper has been prepared and this will be addressed at the second PSC meeting.

Action 6 - Planning Chart

The project schedule has been updated and will be discussed at the PSC meeting.

Action 7 - ECSC Submission

The European Commission have reviewed the MSL submission for ECSC funding of the project to develop tubular joint technology by grout filling. They have recently informed MSL that although they consider the proposal technically very appropriate, they are unable to support it because they consider it "low priority in their current programme".

Action 8 - Press Release

A press release has been drafted and approval of this will be sought from the PSC.

Action 9 - Meeting re: ECSC Submission

The ECSC decision regarding the MSL proposal was received on 18 March 1994.

3. **PROGRESS TO DATE**

It is estimated that the overall progress stands at 10% on the original scope. The overall project schedule is given in Appendix A.

4. **ACTIVITIES FOR NEXT THREE MONTHS**

Subject to approval, the next three month's effort will be directed as follows:-

- Finalise participation agreements
- Receive comments from the Participants on the specifications and procedures presented at the second PSC meeting
- Commence material procurement and fabrication of specimens and test rig
- Instrument test specimen T1
- Commence testing of specimen T1.

TABLES

Title	Work Pack No	MSL Identification Number	Rev No	Issue Date	PSC Meeting	
					No	Date
TECHNICAL REPORT No. 1 Specification and Procedure for grouting of test specimens	2	C141R006	0	March 1994	2	24 March 1994
TECHNICAL REPORT No. 2 Specifications and Procedures for materials, fabrication, instrumentation and testing	2	C141R007	0	March 1994	2	24 March 1994
TECHNICAL REPORT No. 3 Technical Report on Pre-load Investigations	2	C141R008	0	March 1994	2	24 March 1994
TECHNICAL REPORT No. 4 Technical paper on lead-tin alloy model tests	2	C141R009	0	March 1994	2	24 March 1994
PROGRESS REPORT No. 1	1	C141R010	0	March 1994	2	24 March 1994

Table 1: Document Register

C141R010 Rev 0 March 1994

APPENDIX A
PROJECT SCHEDULE

C141R010 Rev 0 March 1994

SCHEDULE FOR GROUTED JOINTS J.I.P.

No.	Activity	Month																							
		N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A		
GJ-1	Management/Coordination																								
GJ-2	Spec. instrumentation																								
	Spec. grout mix																								
	Spec. tube material																								
	Spec. fabrication specimen																								
	Proc. grouting																								
	Proc. cube preparation																								
	Proc. cube testing																								
	Proc. specimen testing																								
	Design test rig																								
GJ-3	Steel material procurement																								
	Grout material procurement																								
	Stain gauges procurement																								
	Fabrication specimen																								
	Fabrication test rig mod.																								
	Assemble test rig																								
	Place strain gauges																								
	Dimensional checks for specimen																								
GJ-4	SCF Tests ungrouted spec.																								
GJ-5	Grout fill all joints																								
	Cure specimens and cubes																								
GJ-6	SCF-GR T1																								
	SCF-GR T3, T5, T7, T9																								
	SCF-GR DT2, DT3, DT4, DT5																								
	SCF-GR DT6, DT8, DT9																								
	SCF-GR DT10, DT11																								
	SCF-GR X1																								
GJ-7	ULT-GR T1																								
	ULT-GR T3, T5, T7, T9																								
	ULT-GR DT2, DT3, DT4, DT5																								
	ULT-GR DT6, DT8, DT9																								
	ULT-GR DT10, DT11																								
	ULT-GR X1																								
GJ-8	Material coupon tests																								
	Cube tests																								
GJ-9	Collect data																								
	Present data																								
	Reduce data																								
GJ-10	Offshore installation study																								
GJ-11	Report of test results SCF																								
	Report T1-SCF/ULT																								
	Report SCF-GR/ULT																								
	Interim reports																								
	Draft final report																								
	Agreed final report																								
	PSC Meetings																								

